

**Notice of Allowability**

**Application No.**

10/785,219

**Examiner**

Tuan N. Nguyen

**Applicant(s)**

JACINAVICIUS ET AL.

**Art Unit**

2828

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/29/2006.
2. ☒ The allowed claim(s) is/are 3-16 and 18-31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 01/25/06;6/1/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 6/23/2006.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***Response to Amendment***

1. In responding to applicant's amendment filed 06/20/2006, claims 3, 8, 13, 18, 24 have been amended, claims 1, 2, 17 have been canceled. Claims 27-31 added.

**REASON FOR ALLOWANCE**

***Allowable Subject Matter***

2. The following is an examiner's statement of reasons for allowance - Applicant's response filed on 06/20/2006 has been considered, with respect to claims 8, 13, 18, 22, 24, and 26 the references of the record fail to teach or suggest a pulse laser comprising:

**Claims 8, 24, 13:**

A switch directing a short pulse from a first to a second path, where the first beam path producing short pulse between first and second mirror, and the second beam path between first and third mirror amplifying the short pulse to higher state, *wherein a passive pulse shortening element is in the first path while absent from the second path, wherein first and second beam paths have common portion between the first mirror and the switch, wherein the passive pulse shortening element is in a separate segment of the first path.*

**Claim 18:**

An optical switch selecting between a resonator cavity having a resonator arm and a gain cavity having a gain arm, *where a pulse shortening element is in the resonator arm and not the gain arm, where the resonator cavity disposed between a first and a second mirror and the resonator arm is between the optical switch and the second mirror, where*

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*the gain cavity is between the first and a third mirror and the gain arm is between the optical switch and third mirror, wherein the resonator cavity and gain cavity share a common segment between the first mirror and the optical switch.*

**Claim 22:**

An active-passive mode locked laser, having a first beam path between a first and a second high reflective mirror with *a loss module, an active and passive mode locker disposed in the first beam path, and a second beam path between the first and a third mirror having a segment common with the first beam path, where a cavity dumper and a gain module is in the common beam path, with a switch disposed at the first end and the first mirror at the other end of the common beam path.*

**Claim 26:**

Method produce laser beam comprising *a resonator cavity comprising a saturable absorber producing a first pulse having peak power below the saturation of the saturable absorber and amplifying the first pulse to produce a second light pulse with duration less than first light pulse, directing the second light pulse into a gain cavity having no saturable absorber and amplifying to a third light pulse with peak power above second.*

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

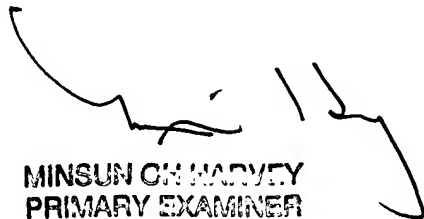
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### Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan N. Nguyen



MINSUN OH HARVEY  
PRIMARY EXAMINER